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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,663	08/28/2003	Norio Shimozone	ASA-1150	6928
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24956	7590	10/24/2005
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SUITE 370
ALEXANDRIA, VA 22314

EXAMINER

DAVIS, CYNTHIA L

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 10/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,663

Applicant(s)

SHIMOZONO ET AL.

Examiner

Cynthia L. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/30/2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7 and 8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 7 and 8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 7/30/2003. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Response to Arguments

Applicant's arguments with respect to claims 1-3, 7, and 8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Block in view of De Nijs and Uchida.

Regarding claim 1, a switch being connected with a storage unit and a computer, said switch being connected with said storage unit through a plurality of communication lines is disclosed in Block, figure 1, elements 18 (the clustering network acts as the switch), 14 (the target node contains a memory, it acts as the storage unit) and 12 (the source node is the computer). A plurality of interfaces being connected with said storage unit or said computer, and an internal switch for connecting said plurality of interfaces with one another is disclosed in figure 1 (the clustering network is connected to the source and target nodes via various links). Said first interface of said plurality of interfaces receives a command from said computer, transfers said command to said

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storage unit through a first communication line of said plurality of communication lines is disclosed in figure 8, elements 180, 182, 184, 186, and 188 (disclosing the procedure for an error-free transmission). Detecting, in response to said command transferred to said storage unit, a trouble occurring in said first communication line, recording a presence of absence of a data transfer upon said command with said recorded identifier, and transmitting, if a presence of a data transfer has been recorded, a frame for noticing an error of said received command to said computer is disclosed in paragraph 59 (disclosing registering the user information when a transfer begins, and notifying the user in case of an error associated with the transfer). Otherwise determining not to transmit said frame for noticing said error of said received command to said computer is disclosed in Block, paragraph 59 (if there is no transfer occurring, there is no end destination, or user of the transfer to notify of the error, making it pointless to send the error message). Thereafter transferring a command to be received from said computer to said storage unit through a second communication line of said plurality of communication lines is disclosed in paragraphs 79 (disclosing autoswitching to a backup path to complete the connection) and 80 (the user may initiate autoswitch in response to a failure, so it would occur after the error message was sent). The first interface recording in said storage unit an identifier for identifying said command is missing from Block. However, de Nijs discloses in column 5, line 67-column 6, line 4, and column 6, lines 17-21, and 33-40, a switch that records the beginning of a data transfer. It would have been obvious to one skilled in the art at the time of the invention to use the transfer-based switching of de Nijs in the system of

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Block. The motivation would be to keep track of ongoing transmissions in the system, to know what resources are available (de Nijs, column 6, lines 20-21). Each of said plurality of interfaces comprising a management table connected to said internal switch is missing from Block. However, Uchida discloses in column 5, lines 6-32, a switch that has a buffer management table connected to the interfaces to an internal memory. It would have been obvious to one skilled in the art at the time of the invention to include a management table in the system of Block. The motivation would be to manage access to the internal storage unit, thereby speeding up the processing times (see Uchida, column 5, lines 30-32).

Regarding claim 2, said first interface determines a trouble occurs in said first communication line if no response to said command having been transmitted to said storage unit is received a certain length time later is disclosed in figure 8, element 190.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block in view of De Nijs and Uchida in further view of Espy.

Regarding claim 3, said first interface detects a trouble occurring in said first communication line by determining a cut-out of a physical connection with said storage unit is missing from Block. However, Espy discloses in column 1, lines 38-41, a cut-out being a problem in a network. It would have been obvious to one skilled in the art to use the recovery method of Block to deal with a cut-out, such as is disclosed in Espy.

The motivation would be to route around the problem.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block in view of De Nijs and Uchida in further view of Ma.

Regarding claim 7, said first interface provides said computer with a virtual storage and, if a command from said computer to said virtual storage is received, translates said command to said virtual storage into a command to said storage unit is missing from Block. However, Block does disclose the switch passing commands via itself from the computer to the storage unit in figure 9. Further, Ma discloses in paragraph 29 a virtual memory in a switch. It would have been obvious to one skilled in the art at the time of the invention to use the virtual storage of Ma in the system of Block. The motivation would be to reduce the total size of the memory and make it more efficient (Ma, paragraph 29).

5. Claims 8 is rejected under 35 U.S.C. 102(e) as being anticipated by Block in view of De Nijs.

Regarding claim 8, receiving a command from said computer, transfers said command to said storage unit through a first communication line of said plurality of communication lines is disclosed in figure 8, elements 180, 182, 184, 186, and 188 (disclosing the procedure for an error-free transmission). Detecting, in response to said command transferred to said storage unit, a trouble occurring in said first communication line, recording a presence of absence of a data transfer upon said command with said recorded identifier, and transmitting, if a presence of a data transfer has been recorded, a frame for noticing an error of said received command to said computer is disclosed in paragraph 59 (disclosing registering the user information when a transfer begins, and notifying the user in case of an error associated with the transfer). Otherwise determining not to transmit said frame for noticing said error of said received

command to said computer is disclosed in Block, paragraph 59 (if there is no transfer occurring, there is no end destination, or user of the transfer to notify of the error, making it pointless to send the error message). Thereafter transferring a command to be received from said computer to said storage unit through a second communication line of said plurality of communication lines is disclosed in paragraphs 79 (disclosing autoswitching to a backup path to complete the connection) and 80 (the user may initiate autoswitch in response to a failure, so it would occur after the error message was sent). Recording in said storage unit an identifier for identifying said command is missing from Block. However, de Nijs discloses in column 5, line 67-column 6, line 4, and column 6, lines 17-21, and 33-40, a switch that records the beginning of a data transfer. It would have been obvious to one skilled in the art at the time of the invention to use the transfer-based switching of de Nijs in the system of Block. The motivation would be to keep track of ongoing transmissions in the system, to know what resources are available (de Nijs, column 6, lines 20-21).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
10/18/2005

CLD
10/18/05


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